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(43) Date of application publication:	07.09.01	(72) Inventor: HOTTA TAKAHISA
(84) Designated contracting states:		(74) Representative:

(54) **MOBILE PHONE**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a mobile phone that has an excellent radio wave receiving characteristics even when the mobile phone is used apart from the mouth of a talker.

SOLUTION: The mobile phone having a 1st operating state where the mobile phone is used close to the face of a user and a 2nd operating state where the mobile phone is used apart from the face, is provided with a sensor that senses a distance between the mobile phone and the face and with a built-in optical microphone provided with a board on which vertical cavity surface light emitting laser beam elements whose luminous emission strength distribution is almost concentrically uniform are arranged and light receiving elements to receive the emitted light from the beam emitting elements are placed, a diaphragm that is placed nearly parallel and close to a position opposed to the board, vibrated by sound pressure, reflects the light from the beam emitting elements to the light receiving elements, a light source drive circuit that supplies a drive current to the beam emitting elements, and a negative feedback circuit that supplies part of the signal outputted from the light receiving elements to the light source drive circuit as a negative feedback signal, and the directivity characteristics of the optical microphone is controlled by using the sensor signal denoting the distance so as to change the magnitude of the negative feedback signal.

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